

"Koehler"). The Examiner indicates that Koehler qualifies as prior art against the instant application under 35 U.S.C. §102(e), based upon its earlier effective U.S. filing date, and also notes various means by which Applicants may attempt overcome the instant rejection, not including arguments based upon technical distinctions. However, Applicants would like to take this opportunity to draw the Examiner's attention to the priority which the Koehler reference claims. The International Application, of which the Koehler reference is a 35 U.S.C. §371 national stage application, was published as PCT Publication No. WO95/11210 on April 27, 1995, thus qualifying as 102(b) prior art against the instant application.

In any event, the Examiner has contended that Koehler teaches a process for preparing a mixture of fatty alcohols having an iodine number in the range from 20 to 110, and having from 8 to 22 carbon atom aliphatic chains which may be saturated or unsaturated, and linear or branched. The Examiner contends that Koehler teaches such a process wherein the fatty alcohols are obtained from coconut and/or palm oil via fractionation of methyl esters before hydrogenating a chosen fraction. The Examiner argues that the only differences between the teachings of Koehler and Applicants' claimed invention are the range of carbon chain length and the iodine value range of the products. The Examiner argues that it would have been obvious to one of ordinary skill in the art to prepare fatty alcohols in accordance with the claimed invention because of the process taught by Koehler.

Applicants strenuously, but respectfully, traverse the Examiner's rejection and the arguments and contentions set forth in support thereof, including those which the Examiner might elect to base upon the equivalent Koehler PCT Publication having an earlier prior art date, for the following reasons.

It is well-settled that in order to establish a *prima facie* case of obviousness based upon a single reference, and thus shift the burden of proving non-obviousness onto Applicants, each of the following three criteria must be satisfied: (1) the reference must contain a teaching or suggestion which would motivate one of ordinary skill in the art to modify the reference as suggested by the Examiner (it is not sufficient to say that the reference can be combined without a teaching in the cited reference to suggest the desirability of such a modification); (2) there must

be a reasonable expectation of success; and (3) the reference must teach or suggest each and every element of Applicant's claimed invention. (M.P.E.P. §2143).

At the outset, Applicants would like to highlight for the Examiner, certain aspects of the claimed invention. One embodiment of Applicants' claimed invention is directed to a process for preparing a mixture of fatty alcohols. The claimed process comprises two steps. First, palm oil fatty acid methyl esters are fractionated to produce a methyl ester fraction substantially comprised of C₁₆ methyl esters and a bottom fraction of predominantly unsaturated C₁₆-C₁₈ methyl esters. Second, the bottom fraction is hydrogenated to produce the corresponding predominantly C₁₆-C₁₈ unsaturated alcohols. Thus, the claimed process comprises, in essence, fractionation to separate saturated and unsaturated methyl esters based on palm oil fatty acids, and hydrogenation from ester to alcohol, and the resulting claimed product of the process comprises a mixture of fatty alcohols, derived from palm oil fatty acid methyl esters, having an iodine value of from 65 to 85.

Koehler, on the other hand, does not teach or suggest a fractionation prior to hydrogenation wherein saturated species and unsaturated species are separated. In Example 1, Koehler teaches that a C_{12/18} palm kernel (*i.e.*, nut) oil methyl ester, which is already the product of a first fractionation, is further fractionated to a C_{12/14} and a C_{16/18} methyl ester fraction. The C_{16/18} fraction is then hydrogenated to produce the alcohols, and subsequently distilled, or further fractionated, to remove a head fraction, thus increasing the unsaturated content. (*See*, Koehler, col. 3, lines 39-35 and Example 1, col. 4, lines 38-41). The resulting product obtained via the process taught by Koehler has an iodine value of 61.3. (*See*, Koehler, col. 4, line 58). Only through further distillation, (*see*, Example 2), is the iodine value raised to about 75. Example 3 of Koehler avoids a second substantial distillation by altering the starting materials to include rapeseed oil, as opposed to simply using palm oil derived species.

Koehler fails to teach or suggest the simplified process according to the claimed invention, whereby a fraction of methyl esters obtained from palm oil fatty acid is first separated into saturated and unsaturated fractions prior to hydrogenation. The claimed invention affords a product having a higher iodine value.

There is no teaching or suggestion contained in the Koehler reference which would motivate one of ordinary skill in the art to modify its teachings as suggested by the Examiner in order to arrive at the claimed invention. Koehler specifically discusses the increase of the product's iodine value via subsequent distillation, and makes no mention of separation prior to hydrogenation. One would be required to deviate from the express teachings of Koehler to arrive at the claimed invention.

Moreover, given that Koehler fails to teach or suggest the steps of the claimed process, and given that Koehler contains no teaching or suggestion to make such a modification, it cannot be said that one of ordinary skill in the art would reasonably expect to succeed in such a deviation from the teachings of Koehler.

Accordingly, Applicants submit that the Examiner has failed to establish a *prima facie* case of obviousness, as none of the three criteria necessary to establish a *prima facie* case of obviousness has been satisfied. Thus, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §103(a), based upon the Koehler reference.

The Provisional Double-Patenting Rejection Based on Koehler

In Paper No. 7, the Examiner also rejects claims 3 and 4 under the judicially created doctrine of obviousness-type double patenting, as being unpatentable over claims 1 and 2 of Koehler. The Examiner contends that claims 3 and 4 of the instant application are obvious over claims 1 and 2 of Koehler for reasons similar to those presented in support of the rejection under 35 U.S.C. §103(a), as set forth above.

Applicants respectfully traverse this provisional rejection under the judicially created doctrine of obviousness-type double patenting for the following reasons.

To begin with, as mentioned above in support of Applicants' traversal of the Examiner's rejection under §103(a) based upon Koehler, Koehler fails to teach, suggest, or in this case, claim a fractionation, prior to hydrogenation, wherein saturated and unsaturated species are separated. In fact, Koehler explicitly claims a step wherein a head fraction is removed subsequent to hydrogenation to adjust the iodine value, *i.e.*, the degree of unsaturation.

Thus, Applicants submit that the instant claims are not obvious over the claims of Koehler, and respectfully request withdrawal of the provisional rejection under the judicially created doctrine of obviousness-type double patenting.

CONCLUSION

In view of the remarks set forth above, Applicants submit that all pending claims patentably distinguish over the prior art of record and known to Applicants, either alone or in combination. Accordingly, reconsideration, withdrawal of the rejections and a Notice of Allowance for all pending claims are respectfully requested.

Respectfully submitted,

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By: _____

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